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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/655,859	09/05/2003	John A. Barton	2003-IP-010400 UI USA	7274

7590 11/17/2005
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EXAMINER

CHAMBERS, TROY

ART UNIT	PAPER NUMBER
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3641

DATE MAILED: 11/17/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/655,859

Applicant(s)

BARTON ET AL.

Examiner

Troy Chambers

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-28 is/are pending in the application.
- 4a) Of the above claim(s) 19-28 is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-18 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☐ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____.
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: ____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-4 are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. 4998477 issued to Barker et al. ("Barker").
3. With respect to claim 1, Barker discloses a firing head 14 having a chamber housing a detonator 15 and having an upper sealing surface (via O-rings 13) and a lower sealing surface (at the end opposite O-ring 13). Barker also discloses a booster charge holder 16 (in Fig. 4) having an upper sealing surface (at 12) and a lower sealing surface (at opposite end of the shoulder 12). The booster charge includes a bulkhead 45 and a booster charge chamber containing booster charge 14.
4. With respect to claim 2, Barker discloses a detonator chamber including a detonator 15, 34. O-rings 13 establish the upper sealing surface.
5. With respect to claims 3 and 4, Barker discloses a seal boot 18 having first and second ends, and, inner and outer surfaces. Either end or surface works in conjunction to seal the inner area of the detonator system.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 5-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Barker as discussed above and in further view of well established case law regarding obviousness. Specifically, Barker discloses a detonator system as discussed above with a retainer located within a boot, both operating together to seal the interior of the detonator chamber. The boot is sealingly attached to the firing head. Applicant claims are directed to a configuration in which the retainer takes the place of Barker's boot and applicant's boot takes the place of Barker's retainer. But, the arrangement achieves the same result in the same way; the boot interacts with the retainer to seal the inside. However, one of ordinary skill in the art would have found it obvious to reverse the order of the parts as claimed by the applicant since it has been held that a mere reversal of the essential working parts of a device involves only routine skill in the art. In re Einstein, 8 USPQ 167.

8. With respect to claims 5-7, refer to the "reversal of parts" part of the rejection.

9. With respect to claim 8, Barker discloses a firing head having a detonator 15, 34. Applicant's use of the term "comprising" the preamble means that a portion as well as a whole of a detonator may be included within the chamber.

10. With respect to claim 9, Barker discloses a booster charge holder 16 including a portion of a detonator 37 adjacent a bulkhead 45.

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11. With respect to claim 10, Barker discloses an electrically fired detonator 15, 34 within the firing head 14 chamber. Also included is a wire line sub 11 electrically coupled to the detonator and sealed to the firing head via O-rings 13.

12. With respect to claim 11, the booster charge holder is in sealing arrangement with the detonator chamber lower surface at shoulder 12.

13. With respect to claim 12, Barker discloses a booster charge 37 carried in the booster charge chamber.

14. With respect to claim 13, Barker discloses detonating cord 19 having one end coupled to booster charge 37 (Fig. 4).

15. With respect to claim 14-18, refer to the "reversal of parts" part of the rejection.

Response to Arguments

16. Applicant's arguments with respect to the drawing objections and rejection of claims 2-7 under 35 USC 112, 2nd paragraph have been fully considered and are persuasive. The objection/rejection of the drawings and claims have been withdrawn.

17. Applicant's arguments filed with respect to the rejection of claims 1-18 over the cited prior art have been fully considered but they are not persuasive.

18. With respect to the rejection of claims 1-4 as being anticipated by Barker, the crux of applicant's argument appears to be that while Barker discloses a fluid seal, there is no disclosure of a pressure seal. However, if a vessel is sealed against a fluid then it is inherently sealed against pressure as well. According to applicant's reasoning, a document describing a submarine would have to explicitly state that the sub protects against the intrusion of fluid AND against the outside pressure. However, both are

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forces are related as a function of one another. A hollow vessel described as watertight is also pressure resistant because the pressure formed by the surrounding fluid is insufficient to penetrate into the interior of the vessel.

19. With respect to the rejection of claims 5-18, the crux of applicant's argument appears to center around the statement, "In contrast the Barker system does not teach or suggest any method for compressing the boot to form a positive fluid seal." However, the Examiner can find no such limitation in the claims.

Conclusion

20. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

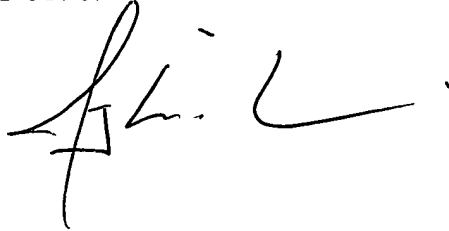
A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

21. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Troy Chambers whose telephone number is (571) 272-6874 between the hours of 7:00 a.m. to 3:30 p.m., M-F. If attempts to reach the

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examiner by telephone are unsuccessful, the examiner's supervisor, Michael J. Carone, can be reached at (571) 272-6873.

Troy Chambers, Examiner

A handwritten signature in black ink, appearing to read 'Troy Chambers', with a stylized flourish at the end.

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